WHAT IS CLAIMED IS:

1. An isolated human antibody, or antigen-binding antibody fragment thereof, or a variant thereof, that specifically binds to an epitope present in an RG1 polypeptide.

2. The antibody, or antigen-binding antibody fragment, of Claim 1, wherein the RG1 polypeptide to which it binds has the amino acid sequence of SEQ ID NO: 2.

3. The antibody, or antigen-binding antibody fragment, of Claim 1, wherein binding to the RG1 polypeptide occurs with a K_D equal to or less than 1μM.

4. The antibody, or antigen binding antibody fragment, of Claim 3, wherein binding to the RG1 polypeptide occurs with a K_D equal to or less than 10nM.

5. The antibody of Claim 1, wherein the antibody comprises a light chain variable region comprising an amino acid sequence having at least 80% sequence identity with SEQ ID NO: 26 or SEQ ID NO: 29.

6. The antibody of Claim 1, wherein the antibody comprises a heavy chain variable region comprising an amino acid sequence having at least 80% sequence identity with SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 30, or SEQ ID NO: 31.

7. The antibody of Claim 1, wherein the antibody comprises a light chain variable region encoded by a nucleotide sequence comprising SEQ ID NO: 20 or SEQ ID NO: 23.

8. The antibody of Claim 1, wherein the antibody comprises a heavy chain variable region encoded by a nucleotide sequence comprising SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 24, or SEQ ID NO: 25.

9. The antibody of Claim 1, wherein the antibody comprises a light chain variable region having the amino acid sequence SEQ ID NO: 26 and a heavy chain variable region having the amino acid sequence SEQ ID NO: 27 or SEQ ID NO: 28.

10. The antibody of Claim 1, wherein the antibody comprises a light chain variable region having the amino acid sequence of SEQ ID NO: 29 and a heavy chain variable region having the amino acid sequence of SEQ ID NO: 30 or SEQ ID NO: 31.

11. The antibody of Claim 9, wherein the heavy chain variable region has the amino acid sequence SEQ ID NO: 27.

12. The antibody of Claim 9, wherein the heavy chain variable region has the amino acid sequence SEQ ID NO: 28.

13. The antibody of Claim 10, wherein the heavy chain variable region has the amino acid sequence SEQ ID NO: 30.

14. The antibody of Claim 10, wherein the heavy chain variable region has the amino acid sequence SEQ ID NO: 31.

15. An antibody which recognizes and binds the same epitope as the epitope bound by the antibody of Claim 9.

16. An antibody which recognizes and binds the same epitope as the epitope bound by the antibody of Claim 10.

17. The antibody fragment of Claim 1, wherein the antibody fragment is selected from a group of fragments consisting of Fv, F(ab'), F(ab')2, and scFv fragments.

18. An immunoconjugate comprising the human monoclonal antibody or antibody fragment of Claim 1, wherein the antibody or antibody fragment is conjugated to a molecule which is a therapeutic agent or a detectable marker.

19. The immunoconjugate of Claim 18, wherein the therapeutic agent is a cytotoxic agent.

20. The immunoconjugate of Claim 19, wherein the cytotoxic agent is selected from a group consisting of ricin, doxorubicin, daunorubicin, Taxol™ (paclitaxel), ethidium bromide, mitomycin, etoposide, tenoposide, vincristine, vinblastine, colchicine, dihydroxy anthracin dione, actinomycin D, diphteria toxin, *Pseudomonas* exotoxin (PE) A, PE40, ricin, abrin, glucocorticoid and radioisotopes.

21. The immunoconjugate of Claim 20, wherein the cytotoxic agent is a radioisotope and is selected from a group consisting of ^{46}Sc, ^{47}Sc, ^{48}Sc, ^{72}Ga, ^{73}Ga, ^{90}Y, ^{67}Cu, ^{109}Pd, ^{11}Ag, ^{149}Pm, ^{153}Sm, ^{166}Ho, ^{177}Lu, ^{186}Re, ^{188}Re, ^{211}At, ^{211}Bi, ^{212}Bi, ^{213}Bi and ^{214}Bi.

22. The immunoconjugate of Claim 18, wherein the detectable marker is a radiolabel, an enzyme, a chromophore, or a fluorescer.

23. The immunoconjugate of Claim 22, wherein the detectable marker is a radiolabel and is selected from a group consisting of is ^{43}Sc, ^{44}Sc, ^{52}Fe, ^{55}Co, ^{68}Ga, ^{64}Cu, ^{86}Y, ^{94m}Tc, ^{111}In, and ^{99m}Tc.

24. The immunoconjugate of Claim 18, wherein conjugation of the antibody or antibody fragment, with the therapeutic agent or detectable marker utilizes a chelator selected from a group consisting of p-SCN-Benzyl-DPTA and derivatives thereof, 1, 4, 7, 10-tetraazacyclododecane-N, N', N'', N'''-tetracetic acid (DOTA) and derivatives thereof, and 1,4,7-triazacyclononane-N, N', N''-triacetic acid (NOTA) and derivatives thereof.

25. The immunoconjugate of Claim 24, wherein the chelator used is cyclohexyl-DPTA (CHX-DPTA) or MX-DPTA (1B4M-DPTA).

26. A method for selectively destroying a cell expressing a human RG1 polypeptide having the amino acid sequence of SEQ ID NO: 2, comprising reacting the immunoconjugate of Claim 20 with the cell such that the cell is destroyed.

27. A method for treating a disease-state in a human patient, wherein the disease-state is associated with expression of an RG1 polypeptide having the amino acid sequence of SEQ ID NO: 2, and wherein the method comprises administering to the patient a therapeutically effective amount of the immunoconjugate of Claim 19.

28. The method of Claim 27, wherein the therapeutic agent of the immunoconjugate is ^{90}Y or ^{177}Lu.

29. The method of Claim 27, wherein the disease-state is prostate cancer.

30. A method of detecting a disease-state in a subject, wherein the disease-state is associated with expression of an RG1 polypeptide having the amino acid sequence of SEQ ID NO: 2, and wherein the method comprises:

(a) administering to the subject the immunoconjugate of Claim 22;

(b) detecting the binding of the immunoconjugate within the subject.; and

(c) determining if the level of binding of the immunoconjugate in the subject is increased as compared with the level of binding detected in disease-free control subjects.

31. The method of Claim 30, wherein the method of detection is immunoscintigrapy.

32. The method of Claim 31, wherein the detectable marker of the immunoconjugate is ^{111}In or ^{99m}Tc.

33. The method of Claim 32, wherein the method of detection is positron emitting tomography.

34. The method of Claim 33, wherein the detectable marker of the immunoconjugate is selected from a group consisting of ^{43}Sc, ^{44}Sc, ^{52}Fe, ^{55}Co, ^{68}Ga, ^{64}Cu, ^{86}Y or ^{94m}Tc.

35. The method of Claim 34, wherein the disease-state is prostate cancer.